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R & D Chronicles - The Mosquito Fighters, Part VIII: Malaria Control in the Pacific War

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Skeeter Beeteres - Navy Malaria Control Unit on Guadalcanal, 1942. BUMED archives.

"Malaria is the primary military problem facing our troops in most active theaters of operation. In the past this disease has immobilized whole armies and, unfortunately, its disabling effects have been too recently re-demonstrated at the expense of our own military efforts. Without detracting, it can be unequivocally stated that this disease is the most serious enemy we will be called to face."

~Vice Adm. Ross McIntire, Surgeon General of the Navy, 1943

Throughout World War II, malaria accounted for 70 percent of all insect-borne diseases affecting U.S. Navy and Marine Corps personnel and sidelined them for over 3.3 million sick days. Although the disease would be encountered in the United States and across almost all combat theaters, nowhere was the malaria menace greater than on the islands and atolls in the Pacific.

As U.S. and Allied Forces fought to remove the entrenched Imperial Japanese foes in the Solomons and New Hebrides Islands they would face what was termed a "hyperendemic intensity" of malaria. According to malariologist Cmdr. (later Rear Adm.) James J. Sapero, in 1942 the First Marine Division on Guadalcanal would suffer the highest malarial rate in the world (100 percent!)

Between August 7, 1942, and February 8, 1943, American troops in the Pacific averaged 10 malaria cases for every combat injury. By March 1943, it was estimated that over half of all Marines serving in the Solomons either had or had suffered from some form of the disease.

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Despite earlier experiences with malaria-carrying mosquitoes in Haiti, Nicaragua, and the Philippines during the inter-war years, the U.S. Forces arrived in the Pacific Theater in 1942 ill-prepared for the mosquito onslaught. There are stories of troops landing without sufficient mosquito nets, insect repellent or supplies of suppressive drugs. In the first months of the New Hebrides and Solomon Island campaigns, screening of hospitals and aid stations was accomplished only after capturing large mosquito nets from Japanese positions.

But the tide of war against the *Anopheles* mosquito would soon turn.

In June 1942, the Bureau of Medicine and Surgery (BUMED) ordered Cmdr. Sapero to Efate, New Hebrides, to implement wide-ranging malaria control measures. Sapero spearheaded the Malaria and Epidemic Control Group, a Navy-led organization that would help “manage” systemic disease control on the island. As the combat theater of operations expanded across the Pacific the Control Group deployed individual Epidemiological and Malaria Control units comprised of malariologists, laboratory technicians, SEABEE civil engineers and some of the first allied scientists in uniform (i.e., Navy entomologists).

Sometimes referred to as the “shock troops” against disease, these units oiled, drained and sprayed mosquito breeding areas; surveyed and collected vital statistics on disease; administered anti-malarial drugs; inspected and fumigated all ships and aircraft travelling from malaria-ridden areas; enforced malaria discipline everywhere there were military personnel; and ensured all malaria casualties were promptly hospitalized and treated as expeditiously as possible.

In no small part to the work of Sapero and the control units, the malaria rate in Efate alone dropped to just 129.7 per 1,000 cases by April 1943. By the end of World War II, over 150 control units were actively engaged in keeping malaria in check across the South Pacific.

A vital part of the malaria control effort was the drug Atabrine. Originally developed by German chemists in the 1930s, Atabrine was a trade name for Quinacrine (*Mepcrine Hydrochloride*) a chemoprophylaxis anti-malarial. In September 1942, BUMED issued an order directing all Navy and Marine Corps personnel in the Pacific Theater to take “one tablet twice daily twice a week.” This recommended dosage would later be increased to twice daily “every third day” and then to three times daily. With its unpleasant taste, tendency to turn skin yellow and unfounded fears of sterility, Atabrine was a bitter pill to swallow in more ways than one. But as long as it was taken it was guaranteed to suppress injurious malaria symptoms.

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